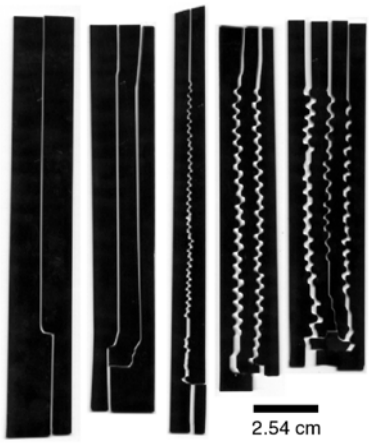
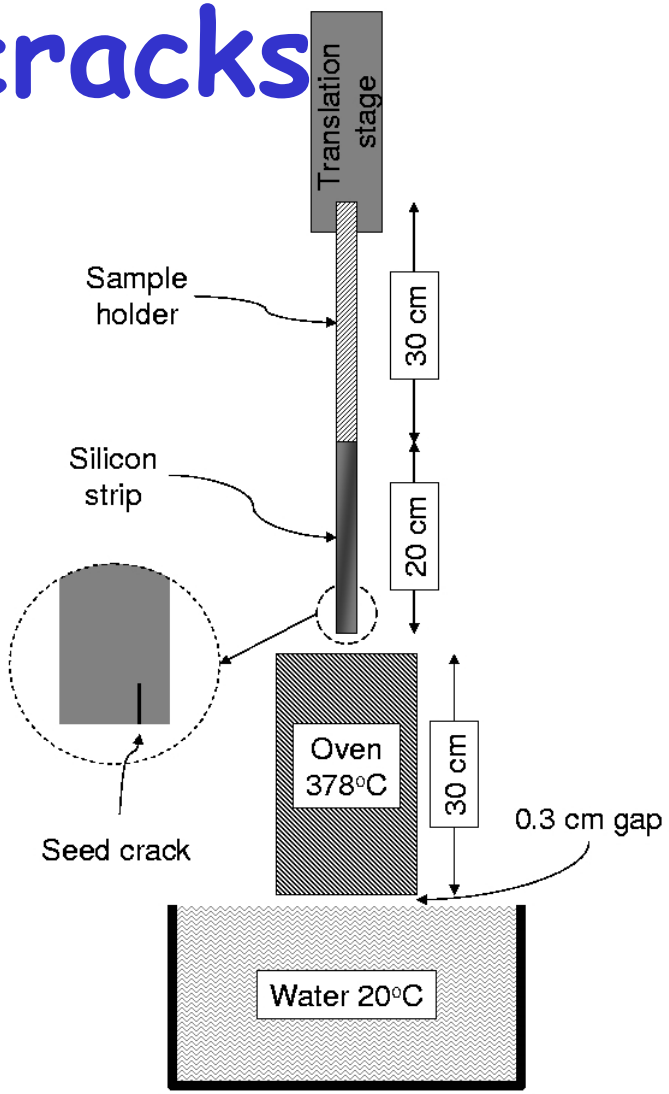
Straight and wavy cracks in Silicon

- Slow fractures driven by thermal gradient.
- Cracks in glass oscillate past a critical threshold. However, cracks in silicon crystals strongly prefer to travel in straight lines along low-energy planes. What wins? Straight lines or curving paths?
- Answer: cracks oscillate smoothly as in glass.





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NSF-Funded Fracture Experiments help educate preservice teachers.

All students in UTeach, the preservice program for secondary science, mathematics and computer science at UT Austin take a course on the nature of scientific research in which they design their own experiments. The course begins by illustrating how one can perform original scientific work ...starting with something as simple as careful observation of popping balloons!

Paul J. Petersan (grad student), Robert D. Deegan (postdoc), Michael Marder (PI), Harry L. Swinney (co-PI), University of Texas at Austin

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Phys. Rev. Lett. 87, 010102 (2001), Phys. Rev. Focus: http://focus.aps.org/v9/st1.htm.

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